



# Ferrite Chip Inductors - 0805AF (2012)

- Higher inductance values than ceramic 0805 inductors
- Inductance values from 0.11  $\mu$ H to 22  $\mu$ H
- Heavier gauge wire for low DCR
- Ferrite construction for high current handling

Part number <sup>1</sup>	Inductance <sup>2</sup> $\pm 5\%$ ( $\mu$ H)	Q typ <sup>3</sup>	Impedance typ (Ohms)	SRF typ <sup>4</sup> (MHz)	DCR max <sup>5</sup> (Ohms)	Irms <sup>6</sup> (mA)	Color code <sup>7</sup>
0805AF-111XJR_	0.11 @ 7.9 MHz	18 @ 7.9 MHz	370 @ 500 MHz	1260	0.05	940	Brown
0805AF-681XJR_	0.68 @ 7.9 MHz	19 @ 7.9 MHz	430 @ 100 MHz	425	0.30	660	Orange
0805AF-102XJR_	1.0 @ 7.9 MHz	17 @ 7.9 MHz	670 @ 100 MHz	355	0.39	650	Yellow
0805AF-122XJR_	1.2 @ 7.9 MHz	19 @ 7.9 MHz	860 @ 100 MHz	375	0.64	440	Brown
0805AF-152XJR_	1.5 @ 7.9 MHz	20 @ 7.9 MHz	1000 @ 100 MHz	285	0.74	390	Green
0805AF-182XJR_	1.8 @ 7.9 MHz	20 @ 7.9 MHz	1360 @ 100 MHz	300	0.98	370	Blue
0805AF-222XJR_	2.2 @ 7.9 MHz	19 @ 7.9 MHz	840 @ 50 MHz	105	0.98	350	Brown
0805AF-272XJR_	2.7 @ 7.9 MHz	19 @ 7.9 MHz	1050 @ 50 MHz	100	1.16	320	Violet
0805AF-332XJR_	3.3 @ 7.9 MHz	19 @ 7.9 MHz	1670 @ 50 MHz	85	1.20	330	Gray
0805AF-472XJR_	4.7 @ 7.9 MHz	18 @ 7.9 MHz	950 @ 25 MHz	55	1.50	280	Black
0805AF-682XJR_	6.8 @ 7.9 MHz	18 @ 7.9 MHz	450 @ 10 MHz	37	1.90	240	Brown
0805AF-103XJR_	10 @ 2.5 MHz	18 @ 2.5 MHz	740 @ 10 MHz	26	2.20	230	Red
0805AF-153XJR_	15 @ 2.5 MHz	17 @ 2.5 MHz	1300 @ 10 MHz	20	4.25	150	Yellow
0805AF-223XJR_	22 @ 2.5 MHz	17 @ 2.5 MHz	1620 @ 10 MHz	21	6.70	120	Green

1. When ordering, please specify **termination** and **packaging** codes:

#### 0805AF-103XJR\_C

**Termination:** R = RoHS compliant matte tin over nickel over silver-platinum-glass frit.

Special order: Q = RoHS tin-silver-copper (95.5/4/0.5) or P = non-RoHS tin-lead (63/37).

**Packaging:** C = 7" machine-ready reel. EIA-481 embossed plastic tape (2000 parts per full reel).

B = Less than full reel. In tape, but not machine ready. To have a leader and trailer added (\$25 charge), use code letter C instead.

- Inductance measured at 0.1 Vrms, using Coilcraft SMD-A fixture in Agilent/HP 4286A impedance analyzer with Coilcraft-provided correlation pieces.
- Q measured on Agilent/HP 4395A with Agilent/HP 16193 test fixture.
- SRF measured using Agilent/HP 8753D network analyzer with Coilcraft SMD-D test fixture.
- DCR measured on Cambridge Technology Micro-ohmmeter.
- Current that causes a 15°C temperature rise from 25°C ambient. This information is for reference only and does not represent absolute maximum ratings. [Click for temperature derating information.](#)
- Each part is marked with a single dot. The color dots are not unique identifiers and correspond to multiple inductance values.
- Electrical specifications at 25°C.

Refer to Doc 362 "Soldering Surface Mount Components" before soldering.

**Designer's Kit C450** contains 10 of each value

**Core material** Ferrite

**Environmental** RoHS compliant without exemption, halogen free

**Terminations** RoHS compliant matte tin over nickel over silver-platinum-glass frit. Other terminations available at additional cost.

**Weight** 16.7– 18.0 mg

**Ambient temperature** -40°C to +85°C with Irms current

**Maximum part temperature** +100°C (ambient + temp rise). [Derating.](#)

**Storage temperature** Component: -40°C to +100°C.

Tape and reel packaging: -40°C to +80°C

**Resistance to soldering heat** Max three 40 second reflows at +260°C, parts cooled to room temperature between cycles

**Moisture Sensitivity Level (MSL)** 1 (unlimited floor life at <30°C / 85% relative humidity)

**Failures in Time (FIT) / Mean Time Between Failures (MTBF)**

One per billion hours / one billion hours, calculated per Telcordia SR-332

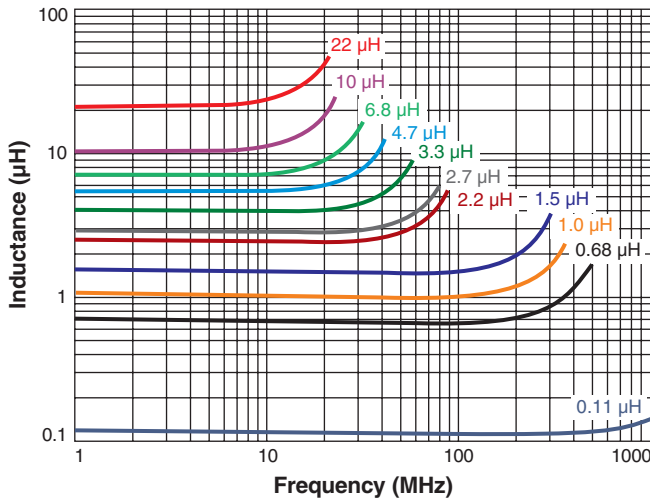
**Packaging** 2000/7" reel; Plastic tape: 8 mm wide, 0.23 mm thick, 4 mm pocket spacing, 1.65 mm pocket depth

**PCB washing** Tested to MIL-STD-202 Method 215 plus an additional aqueous wash. See [Doc787\\_PCB\\_Washing.pdf](#).

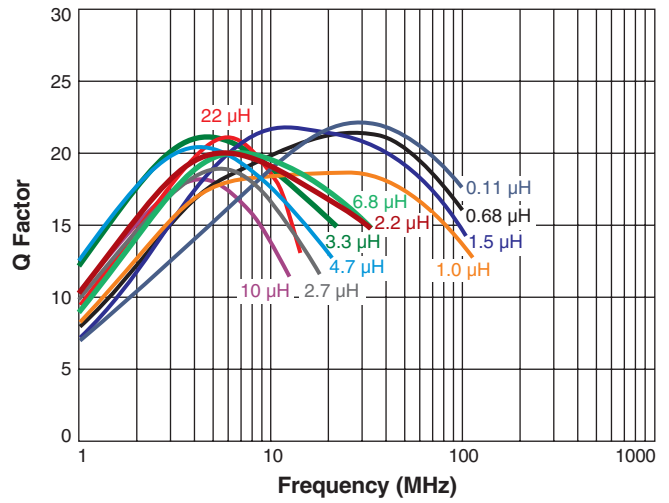


# Ferrite Chip Inductors – 0805AF Series

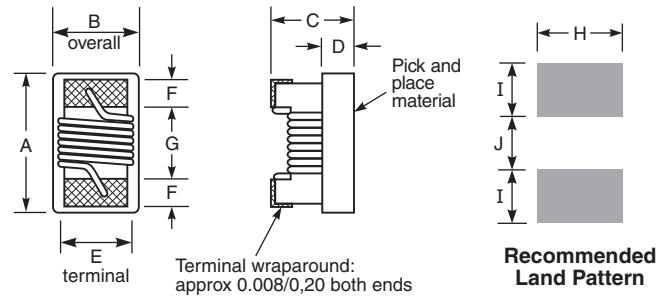
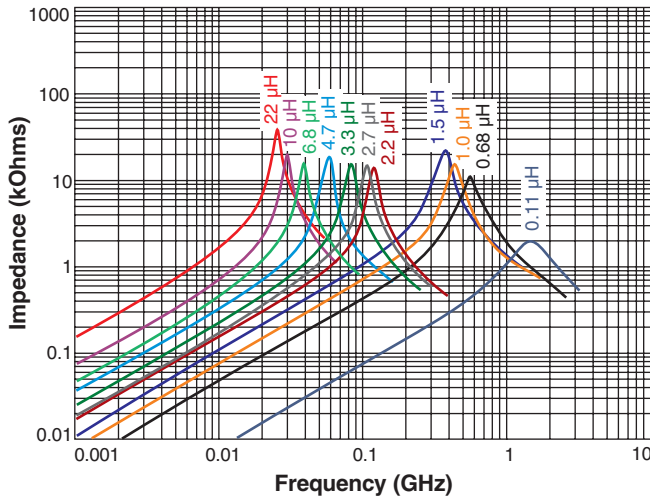
## Typical L vs Frequency



## Typical Q vs Frequency



## Typical Impedance vs Frequency



A	B	C	D	E	F	G	H	I	J
max	max	max	ref						
0.090	0.068	0.060	0.020	0.050	0.016	0.040	0.070	0.040	0.030
2,29	1,73	1,52	0,51	1,27	0,41	1,02	1,78	1,02	0,76

**Note:** Height dimension (C) is before optional solder application. For maximum height dimension including solder, add 0.006 in / 0,152 mm.



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Document 781-2 Revised 10/12/15  
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